

**C**riminal  
**I**nvestigative  
**P**olicy &  
**O**versight



**Evaluation of the Policies and Practices for the Utilization  
of DNA Technology within the  
Military Criminal Investigative Organizations**

Report Number CIPO2002S002

May 17, 2002

**Office of the Inspector General  
of the Department of Defense**

Report Documentation Page		
<b>Report Date</b> 17 May 2002	<b>Report Type</b> N/A	<b>Dates Covered (from... to)</b> -
<b>Title and Subtitle</b> Evaluation of the Policies and Practices for the Utilization of DNA Technology Within the Military Criminal Investigative Organizations		<b>Contract Number</b>
		<b>Grant Number</b>
		<b>Program Element Number</b>
<b>Author(s)</b>		<b>Project Number</b>
		<b>Task Number</b>
		<b>Work Unit Number</b>
<b>Performing Organization Name(s) and Address(es)</b> DoD Inspector General ATTN: CIPO 400 Army Navy Drive Arlington, VA 22202		<b>Performing Organization Report Number</b> CIPO2002S002
<b>Sponsoring/Monitoring Agency Name(s) and Address(es)</b>		<b>Sponsor/Monitor's Acronym(s)</b>
		<b>Sponsor/Monitor's Report Number(s)</b>
<b>Distribution/Availability Statement</b> Approved for public release, distribution unlimited		
<b>Supplementary Notes</b> The original document contains color images.		
<b>Abstract</b> Deoxyribonucleic Acid (DNA) testing was first used in a criminal investigation in the mid 1980s. Since that time it has become one of the most high profile investigative tools available and one that is highly effective. DNA testing has helped investigators identify perpetrators of violent crimes and the remains of missing persons or victims of mass disasters, as well as exonerate the innocent. In DoD, the Military Criminal Investigative Organizations (MCIOs) <sup>1</sup> are responsible for investigating major crimes within their respective areas of responsibility. MCIO investigative policies and procedures include the processing of crime scenes. The use of DNA analysis of evidence as an investigative tool by the MCIOs has grown considerably in recent years because improved technology has rendered more accurate results. Further, DNA evidence is being used more frequently to convict perpetrators and exonerate suspects. Currently, within the DoD, the U.S. Army Criminal Investigation Laboratory (USACIL) is the only military forensic laboratory capable of DNA analysis. On December 19, 2000, Congress passed the DNA Analysis Backlog Elimination Act of 2000 (PL 106-546). The Act authorized Federal assistance to States to enable them to clear their backlogs of DNA samples collected from convicted offenders and crime scenes, provided the resulting DNA profiles are entered into the Combined DNA Index System of the Federal Bureau of Investigation (FBI). For DoD, this Act added the requirement to collect, analyze, and index DNA samples from persons convicted of certain offenses under military law. On May 16, 2001, the Under Secretary of Defense for Personnel and Readiness (USD (P&R)) issued a memorandum to the Services establishing policy for implementing the Act. The memorandum requires USACIL to analyze all DNA samples collected from Armed Forces members convicted of certain military offenses, and to send the results to the FBI for inclusion in the National DNA Index System, an element of CODIS.		

<b>Subject Terms</b>	
<b>Report Classification</b> unclassified	<b>Classification of this page</b> unclassified
<b>Classification of Abstract</b> unclassified	<b>Limitation of Abstract</b> UU
<b>Number of Pages</b> 44	

## **Additional Information and Copies**

The Office of the Deputy Assistant Inspector General for Criminal Investigative Policy and Oversight, Office of the Assistant Inspector General for Investigations, DoD, prepared this report. To obtain additional copies of this evaluation report, visit the IG DoD Homepage at <http://www.dodig.osd.mil/dcis/cipo/evals.htm>, or contact Mr. David Holmes at (703) 604-8746 (DSN 664-8746) ([dholmes@dodig.osd.mil](mailto:dholmes@dodig.osd.mil)).

## **Suggestions for Evaluation**

To suggest ideas for or to request evaluations, contact the Audit Followup and Technical Support Directorate at (703) 604-8940 (DSN 664-8940) or fax (703) 604-8932. Ideas and requests can also be mailed to:

OAIG-AUD (ATTN: AFTS Audit Suggestions)  
Inspector General of the Department of Defense  
400 Army Navy Drive (Room 801)  
Arlington, VA 22202-4704

## **Defense Hotline**

To report fraud, waste, or abuse, contact the Defense Hotline by calling (800) 424-9098; by sending an electronic message to [Hotline@dodig.osd.mil](mailto:Hotline@dodig.osd.mil); or by writing to the Defense Hotline, The Pentagon, Washington, DC 20301-1900. The identity of each writer and caller is fully protected.

## **Acronyms**

AFOSI	Air Force Office of Special Investigations
ASCLD	American Society of Crime Laboratory Directors
CODIS	Combined DNA Index System
DNA	Deoxyribonucleic Acid
DoJ	Department of Justice
FBI	Federal Bureau of Investigation
FC	Forensic Consultant
FSC	Forensic Science Consultant
FSO	Forensic Science Officer
MCIO	Military Criminal Investigative Organization
MCRT	Major Case Response Team
NCIS	Naval Criminal Investigative Service
NDIS	National DNA Index System
NCISRFL	Naval Criminal Investigative Regional Forensic Laboratory
QMO	Qualifying Military Offense
USACIDC	U.S. Army Criminal Investigation Command
USACIL	U.S. Army Criminal Investigation Laboratory
USD (P&R)	Under Secretary of Defense for Personnel and Readiness





INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

May 17, 2002

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE  
(FINANCIAL MANAGEMENT AND COMPTROLLER)  
NAVAL INSPECTOR GENERAL  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Report on the Evaluation of the Policies and Practices for the Utilization of DNA Technology within the Military Criminal Investigative Organizations (Report No. CIPO2002S002)

We are providing this final report for your review and for any additional comment as appropriate or as requested. We considered management comments on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Army and Navy were responsive to all recommendations. The Air Force concurred with Recommendations A.1 and A.3, and partially concurred with Recommendation B. For reasons set forth in the final report, we did not accept the basis for partial concurrence with Recommendation B in the draft report. We request the Air Force provide additional comments on Recommendation B. Comments are to be submitted by June 16, 2002.

We appreciate the courtesies extended to the evaluation staff. For additional information on this report, please contact Mr. David Holmes at (703) 604-8746 (DSN 664-8746) ([dholmes@dodig.osd.mil](mailto:dholmes@dodig.osd.mil)).

Charles W. Beardall  
Deputy Assistant Inspector General  
Criminal Investigative Policy and Oversight



## **Office of the Inspector General of the Department of Defense**

**Report No. CIPO2002S002**

(Project No. 2001C001)

**May 17, 2002**

### **Evaluation of the Policies and Practices for the Utilization of DNA Technology within the Military Criminal Investigative Organizations**

#### **Executive Summary**

**Introduction.** Deoxyribonucleic Acid (DNA) testing was first used in a criminal investigation in the mid 1980s. Since that time it has become one of the most high profile investigative tools available and one that is highly effective. DNA testing has helped investigators identify perpetrators of violent crimes and the remains of missing persons or victims of mass disasters, as well as exonerate the innocent.

In DoD, the Military Criminal Investigative Organizations (MCIOs)<sup>1</sup> are responsible for investigating major crimes within their respective areas of responsibility. MCIO investigative policies and procedures include the processing of crime scenes. The use of DNA analysis of evidence as an investigative tool by the MCIOs has grown considerably in recent years because improved technology has rendered more accurate results. Further, DNA evidence is being used more frequently to convict perpetrators and exonerate suspects. Currently, within the DoD, the U.S. Army Criminal Investigation Laboratory (USACIL) is the only military forensic laboratory capable of DNA analysis.

On December 19, 2000, Congress passed the DNA Analysis Backlog Elimination Act of 2000 (PL 106-546). The Act authorized Federal assistance to States to enable them to clear their backlogs of DNA samples collected from convicted offenders and crime scenes, provided the resulting DNA profiles are entered into the Combined DNA Index System of the Federal Bureau of Investigation (FBI). For DoD, this Act added the requirement to collect, analyze, and index DNA samples from persons convicted of certain offenses under military law. On May 16, 2001, the Under Secretary of Defense for Personnel and Readiness (USD (P&R)) issued a memorandum to the Services establishing policy for implementing the Act. The memorandum requires USACIL to analyze all DNA samples collected from Armed Forces members convicted of certain military offenses, and to send the results to the FBI for inclusion in the National DNA Index System, an element of CODIS.

---

<sup>1</sup> The MCIOs are the U.S. Army Criminal Investigation Command; the Air Force Office of Special Investigations; and the Naval Criminal Investigative Service, which services the Navy and Marine Corps.

**Objectives.** The primary objective of this evaluation was to assess the effectiveness of MCIO policies and practices regarding the use of DNA technology. Specifically, we evaluated the extent to which investigators use DNA analysis and the adequacy of DoD resources for processing DNA in support of criminal investigations and in meeting legislative requirements for convicted offender DNA analysis and indexing.

**Evaluation Results.** Special agents in the MCIOs use DNA technology as an investigative tool and have achieved effective results. Using DNA technology, investigators are able to solve crimes by identifying the perpetrators of violent crimes and by clearing blameless suspects. However, our evaluation determined that improvements could be made in using DNA technology.

- Additional clarification or guidance to MCIO agents is needed on submission of DNA evidence for analysis in unknown subject<sup>2</sup> cases.
- The Naval Criminal Investigative Service (NCIS) must reduce the backlog of rape kits<sup>3</sup> on unknown subject cases that have not been submitted to a laboratory for DNA analysis.
- Additional training on DNA technology may be warranted to improve agent awareness of DNA database capabilities.
- MCIO agents need to use forensic laboratories that are CODIS certified to ensure DNA evidence profiles are entered into the FBI forensic evidence index of CODIS.

**Summary of Recommendations.** We recommend that the Commanders, U.S. Army Criminal Investigation Command and Air Force Office of Special Investigations, and the Director, Naval Criminal Investigative Service, provide additional guidance or clarification for submission of DNA evidence in unknown subject cases. We also recommend that the Naval Criminal Investigative Service either contract out or work with the U.S. Army Criminal Investigation Laboratory to reduce their backlog of unprocessed rape kits currently being stored in evidence facilities. Further, we recommend that the Commanders, U.S. Army Criminal Investigation Command and Air Force Office of Special Investigations, and the Director, Naval Criminal Investigative Service, provide training or take other action as necessary to ensure that agents are familiar with CODIS and understand its significance as an investigative tool. Finally, we recommend that the Director, Naval Criminal Investigative Service, and the Commander, Air Force Office of Special Investigations, review guidance to agents on

---

<sup>2</sup> In the criminal investigative community, the term “subject” is used to refer to a person suspected of having committed a crime.

<sup>3</sup> Rape kits provide medical personnel a standardized means of obtaining and preserving biological evidence from victims of rapes and sexual assaults, ensuring the quality, quantity, and preservation of evidentiary specimens.

the use of laboratories for DNA analysis and ensure that laboratories used are CODIS certified.

**Management Comments.**

The Army, Navy, and Air Force concurred with the recommendation that additional guidance and training be provided for submission of potential DNA evidence in unknown subject cases to forensic laboratories for analysis.

The Navy concurred with the recommendation to work with the U.S. Army Criminal Investigation Laboratory to clear up the NCIS backlog of unprocessed rape evidence currently being stored in evidence facilities.

The Army, Navy, and Air Force concurred with the recommendation to provide training or take other action as necessary to strengthen agents' awareness of CODIS, and to understand its significance as an investigative tool.

The Navy concurred with the recommendation to review guidance to agents on the use of laboratories for DNA analysis and ensure that laboratories used are CODIS certified. The Air Force partially concurred stating they concurred in theory; however, there were several reasons why they would not mandate the use of a CODIS laboratory for DNA analysis at this time, including increased costs and increased turn-around times. They agreed to review and update their list of approved laboratories, and to keep the list updated.

**Evaluation Response.** The Army and Navy concurred with all recommendations. The Air Force disagreed with the recommendation to require the use of CODIS certified laboratories for conducting DNA analyses. While they agreed there would be added benefits, they will not mandate the use of CODIS certified laboratories at this time because of possible increased costs and turn-around times for processing evidence. We request the Air Force reconsider its position and provide comments to the final report by June 16, 2002.

A discussion of management comments can be found in this report following each recommendation. The complete text of management comments can be found following Appendix B.

---

# **Table of Contents**

---

<b>Executive Summary</b>	i
--------------------------	---

## **Introduction**

Background	1
Objectives	2

## **Findings**

Evaluation Results	3
A. DNA Technology in the Military Criminal Investigative Organizations	9
B. DNA Profiling	15

## **Appendices**

A. Evaluation Process	21
Scope	
Methodology	
Prior Coverage	
B. Report Distribution	23

## **Management Comments**

Department of the Army Comments	26
Department of the Navy Comments	28
Department of the Air Force Comments	32

---

## Background

DNA (deoxyribonucleic acid) is found in the nucleus of cells that contain chromosomes. It provides the genetic code that determines the finite building blocks, or nucleotides, that make up our individual characteristics. Except for identical twins, each person's DNA is unique. DNA testing represents the most significant advance in forensic science since the advent of fingerprinting in the early 1900s. DNA profiling can identify an individual's DNA to a frequency of occurrence in a population to one in several quadrillion. DNA testing is possible whenever such biological samples as semen, saliva, hair, or blood are available. Since the late 1980s, DNA testing has proven to be a powerful investigative tool for law enforcement. Violent crimes, particularly sexual assault cases, that once might have gone unresolved due to insufficient evidence are now being solved through the use of DNA recovered from crime scenes. DNA evidence can also be used to exonerate individuals who have been wrongly accused.

**Legislative Requirements.** The use of DNA technology in the criminal justice system has received significant attention in recent years. Several laws have been passed relating to DNA technology and its use in the criminal justice system. The DNA Identification Act of 1994 (P.L. 103-322), requires the establishment of DNA quality assurance and proficiency testing standards, as well as a national index of DNA samples. In response to the indexing authority provided in the 1994 Act, the FBI established the Combined DNA Index System (CODIS).

The language in the 1994 Act did not include a requirement to obtain DNA samples from convicted Federal offenders. In 1996, Congress passed the Antiterrorism and Effective Death Penalty Act of 1996 (P.L. 104-132), which among other things, authorized the Director of the FBI to expand CODIS to include DNA samples from offenders convicted of Federal crimes and crimes committed in the District of Columbia.

In a 1998 Appropriations Act for the Departments of Commerce and State, the Judiciary, and related agencies, Congress provided the Department of Justice (DoJ) funds for DNA related programs. Additionally, the law required the Attorney General to submit a report to Congress with an implementation plan for collecting DNA samples from persons convicted of Federal sex offenses. DoJ (specifically the FBI) complied by submitting their report in December 1998 and requested that Congress enact statutory authority to allow the taking of DNA samples from persons committing Federal crimes of violence, and similar crimes in the District of Columbia or while in the military, and authorize them to be included in CODIS.

In December 2000, Congress responded to the FBI request and passed the DNA Analysis Backlog Elimination Act of 2000. The Backlog Elimination Act authorized Federal assistance to States to enable them to clear their backlogs of DNA samples collected from convicted offenders and crime scenes that the States had been unable to analyze because of shortfalls in resources, provided the resulting DNA profiles are entered into CODIS. For DoD, this Act added

---

the requirement to collect, analyze, and index DNA samples from persons convicted of certain offenses under military law.<sup>4</sup>

**DoD Implementation.** On May 16, 2001, the Under Secretary of Defense for Personnel and Readiness (USD (P&R)) issued a memorandum to the Services establishing policy for implementing Section 5 of the DNA Analysis Backlog Elimination Act of 2000. The memorandum designated the U.S. Army Criminal Investigation Laboratory (USACIL) as responsible for convicted offender DNA analysis. USACIL is accredited by the American Society of Crime Laboratory Directors (ASCLD), and is the only forensic laboratory within DoD that is capable of DNA analysis. USACIL was also made responsible for sending DNA profiles of convicted offenders to the FBI for inclusion into CODIS.

**U.S.A. Patriot Act of 2001.** In October 2001, Congress passed the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (P.L. 107-56), also known as the U.S.A. Patriot Act. The Patriot Act amends the DNA Analysis Backlog Elimination Act of 2000 by adding numerous offenses to the list of qualifying Federal offenses, which serves as the basis for collecting DNA samples from convicted offenders. The Act is being reviewed by USD(P&R) to determine if any offense should be added to the list of qualifying military offenses.

## Objectives

The primary evaluation objective was to assess the effectiveness of MCIO use of DNA technology. Specifically, we evaluated the extent to which investigators collect and use potential DNA evidence and the adequacy of the resources to support its use in criminal investigations. We also assessed the effectiveness of DoD in meeting requirements for the collection, analysis, and indexing of DNA samples taken from military members who have been convicted of offenses under military law. See Appendix A for a discussion of the evaluation scope and methodology and for prior coverage.

---

<sup>4</sup> No funding was specifically identified for DoD in this legislation.

---

## Evaluation Results

Special Agents in the Military Criminal Investigative Organizations (MCIOs) use DNA technology as an investigative tool with effective results. Using DNA technology, investigators have been able to solve crimes by identifying the perpetrators of violent crimes and by clearing blameless suspects. In addition, technical forensic assistance is available to agents through the use of forensic experts assigned within each MCIO. MCIO agents primarily obtain their analysis of DNA samples from the U.S. Army Criminal Investigation Laboratory located at Fort Gillem, Georgia.

## Background

Our review determined that overall MCIO agents follow their organization's guidance and procedures for identifying, preserving, and collecting biological evidence<sup>5</sup> for subsequent technical or scientific examination, and that they are trained in the fundamentals of those duties. How crime scenes are processed and investigations are conducted, and under what circumstances potential DNA evidence is submitted for forensic analysis, varies with each MCIO. The MCIOs have developed crime scene handbooks that are provided to their investigators as a ready-reference for evidence collection and preservation, including biological evidence. In addition, agents receive technical assistance, training, consultation, and on-site assistance when needed from designated forensic specialists within each MCIO.

**U.S. Army Criminal Investigation Command (USACIDC).** USACIDC currently has 12 Forensic Science Officers (FSOs) who provide support in complex investigations. The support includes on-site crime scene assistance and training for field units to ensure the use of appropriate forensic techniques. USACIDC policy makes USACIDC commanders at all levels responsible for ensuring FSOs are consulted where their expertise would be helpful in resolving the matter under investigation. Battalion Commanders decide when field agents must coordinate with their servicing FSO. Not all FSO positions are full time. In addition to their FSO functions, some of these agents are assigned other duties.

USACIDC field agents receive DNA forensic support from USACIL,<sup>6</sup> which provides state-of-the art forensic DNA examinations. USACIL is accredited by the American Society of Crime Laboratory Directors and under a Memorandum of Understanding (MOU) with the FBI participates in the National DNA Index System (NDIS).

**Naval Criminal Investigative Service (NCIS).** NCIS currently has six Forensic Consultants (FCs), with one additional agent in training who will

---

<sup>5</sup> Biological evidence includes blood, semen, saliva, and other body fluids.

<sup>6</sup> Army policy requires USACIDC investigators to use USACIL for their forensic needs unless prior approval to use another laboratory is granted by the Commander, USACIL.

---

become the seventh FC. NCIS uses Major Case Response Teams (MCRTs) to process major crime scenes. The teams assume the forensic collector role in crime scene management and use a three-tiered approach to crime scene processing. Tier I, the “Essential Level,” employs basic skills held by all NCIS agents. Tier II, the “Advanced Level,” uses crime scene specialists who have advanced training in crime scene examination and forensics. Tier III, the “Masters Level,” uses special agents who have graduated from an accredited forensic science program, hold a Master of Forensic Science degree, and are assigned as FCs. FCs oversee the MCRTs, but do not manage them. It is up to local field offices to set policy on when the MCRT responds, but at a minimum, they respond to all death cases and sexual assaults. NCIS policy recommends that agents coordinate with their servicing FC as appropriate. For most investigations the Special Agent in Charge of a field office retains operational control of the investigation and works closely with the MCRT.

NCIS operates two limited-service, ASCLD accredited forensic laboratories designated as Naval Criminal Investigative Service Regional Forensic Laboratories (NCISRFLs). One is located in Norfolk, Virginia, and the other is in San Diego, California. Both NCISRFLs provide forensic support in the disciplines of latent prints, drug chemistry, arson, and questioned documents. For serology/DNA analysis, NCIS must obtain support from other laboratories.

**Air Force Office of Special Investigations (AFOSI).** AFOSI currently has six Forensic Science Consultants (FSCs) who assist field agents on forensic matters.<sup>7</sup> AFOSI policy requires agents to coordinate all death investigations, rape allegations, and reports of child sexual abuse with their servicing FSCs. In addition, AFOSI policy advises agents to consult with the FSCs on investigations where biological evidence is involved.

AFOSI does not have a forensic laboratory organic to the command; instead, agents are required to use laboratories approved by their FSCs and listed on an Approved Forensic Sciences Laboratory List. Currently, 32 laboratories that conduct DNA analysis are on the AFOSI Approved Forensic Science Laboratory List, including USACIL.

## Agent Use of DNA Analysis<sup>8</sup>

**Survey Results on Agents Use of DNA Analysis.** Using a random sample of 240 MCIO agents, we conducted a survey that was posted on the World Wide Web. The extent of investigative experience of the responding agents was as follows:

- less than 1 year, 5 percent;
- more than 1 but less than 3 years, 13 percent;
- more than 3 but less than 5 years, 11 percent;

---

<sup>7</sup> An additional FSC position has recently been authorized.

<sup>8</sup> See Appendix A for details regarding the methodology of the survey and file review discussed here.

---

- more than 5 but less than 7 years, 12 percent; and
- 7 years or more, 59 percent.

Forty-two percent of the agents who responded to the survey indicated that as the case agent, they determine whether to request DNA analysis of evidence collected at a crime scene. Thirty-seven percent of the respondents indicated they consulted with either their service forensic experts or their supervisors when making the determination of whether to send potential DNA evidence to a laboratory for analysis.

**Types of Offenses.** We asked agents which types of offenses (CY 1999 through CY 2000) were most likely to result in the collection of DNA evidence and its submission to a laboratory for analysis. Of the 240 respondents, 79 (33 percent) indicated that they had never collected and submitted potential DNA evidence to a laboratory during that 2-year period. Table 1 identifies the types of offenses and the number of occasions agents indicated they had collected evidence and submitted it to a laboratory for DNA analysis.

**Table 1. Types of Offenses and Number of Occasions MCIO Agents Indicated Collecting and Submitting Potential DNA Evidence to a Laboratory**

Offenses	Number of USACIDC Agents Responding	Number of NCIS Agents Responding	Number of AFOSI Agents Responding	Totals
Rape	56	41	47	144
Carnal Knowledge	21	4	22	47
Indecent Acts/Assault	20	8	17	45
Murder	19	17	6	42
Forcible Sodomy	22	8	4	34
Aggravated Assault	17	7	9	33
Housebreaking/Burglary	11	6	2	19
Sodomy with a Child	9	4	5	18
Other	6	3	8	17
Robbery	7	1	2	10
Arson	6	0	1	7
Kidnapping	2	1	0	3
Prostitution	0	0	0	0
Pandering	0	0	0	0

**Effectiveness of DNA Analysis.** In our survey questionnaire we asked those agents who indicated they had used and submitted evidence for DNA analysis to a laboratory if doing so had ever resulted in the positive identification of a perpetrator(s) or to the exoneration of a suspect(s). Of the 161 agents who indicated they had been involved in cases where such evidence was submitted, 108 (67 percent) said doing so resulted in a positive identification of a

---

perpetrator(s) and 42 (26 percent) indicated that DNA evidence exonerated one or more suspect(s).

In addition to the survey questionnaire, we also reviewed a sample of 280 MCIO closed investigation case files to determine the extent to which DNA technology played a role in those investigations. The sample size was based on 7,551 investigations that covered CYs 1999 through 2000 and on the same offenses identified in Table 1. Of the 280 case files we reviewed, 21 had documentation that evidence had been sent to a laboratory for DNA analysis. These offenses consisted of rape (43 percent), indecent assault (14 percent), and child sexual abuse (10 percent). The following case file examples illustrate instances where DNA analysis proved to be an effective investigative tool:

- **Housebreaking, Larceny and Damage to Government Property.** An investigation at an Army installation was initiated after thousands of dollars worth of government and private property, including buildings, windows, computer and television equipment, and a vehicle were damaged or destroyed. A witness observed a suspect in the vicinity the morning of the destruction. Investigators collected evidence that included a guidon pole and a tee shirt containing bloodstains. DNA analysis of the blood on the tee shirt and guidon pole matched the DNA of the suspect. As a result, he received 30 days restriction, 30 days additional duty, and was ordered to pay \$7,000 in fines and damages.
- **Indecent Acts.** In October 1998, an investigation was initiated after a 12-year-old victim told her father she had been forced to perform oral sex on a 20-year-old subject three times between June and August 1998. The victim said that on the first occasion the suspect ejaculated on the floor in the Youth Center of an Air Force base. Even though the incident took place approximately four months before the victim reported it, investigators were able to obtain enough of the semen stain from the floor for USACIL to retrieve DNA from the sample. The DNA matched that of the suspect. As a result of the evidence against him, he received 63 months confinement with 36 months probation, and a \$400 fine.
- **Indecent Assault.** An investigation was initiated after a male victim alleged that a male suspect sexually assaulted him in the victim's bed. The individuals were roommates in a Navy dormitory. The suspect claimed the two had consensual sex in the suspect's bed. General court-martial charges were preferred against the suspect. Investigators collected sheets from both beds and sent them to USACIL for DNA analysis. Analysis of the semen found on the suspect's sheets disclosed the DNA of both the suspect and victim; however, no semen or DNA could be found on the victim's sheets. Since DNA evidence refuted the victim's statement regarding the location and nature of the assault, charges for assault against the suspect were dropped.

**Biological Evidence Collected but Not Submitted.** In our survey, we also asked agents to identify the number of investigations in the two years under review in which they participated where biological evidence was collected but

---

not submitted for DNA analysis. Of the 237 agents who responded, 56 (24 percent) indicated they participated in one or two investigations where such potential DNA evidence was collected but not submitted; 26 (11 percent) participated in 3 or 4 investigations where evidence was collected but not submitted; and 31 (13 percent) participated in more than four investigations where evidence was collected but not submitted. One hundred and twenty four (52 percent) responded that they never participated in an investigation where potential DNA evidence was collected but not submitted to a laboratory for analysis. Factors contributing to collecting but not submitting the biological evidence include: investigations of sex offenses in which there is no question that a sexual act occurred, and the only issue is consent; cases in which there is other adequate corroborating evidence (fingerprints, confession, etc.); or investigations in which the prosecutor does not think the submission of potential DNA evidence is warranted.

## Agent Use of Forensic Laboratories

**Laboratories Used by Agents.** For the analysis of DNA, USACIDC agents almost exclusively use USACIL. Based on our discussions with MCIO forensic experts, our review of closed case files, and the survey questionnaire we used, we found that NCIS and AFOSI agents use USACIL frequently. Because NCIS and AFOSI do not track costs of DNA analysis or which laboratories their agents use for evidence processing, we could not readily assess costs or laboratory usage associated with DNA analysis not conducted at USACIL.

Fifty-two out of 240 (22 percent) respondents stated that they had never used a laboratory for DNA purposes. We asked agents who had used laboratories for DNA analysis in the two years under review to give their reasons for using a particular laboratory. The ranking choices available were Agency Policy, Quality of Service, Timeliness, Availability of Specialized Techniques, Location of Laboratory, and Cost. The number one reason agents gave for using a particular laboratory was Agency Policy, followed by Quality of Service, Timeliness, Availability of Specialized Techniques, Location of Laboratory, and Cost.

## Agent Use of Forensic Experts

MCIO agents rely on and effectively use their forensic experts for technical assistance in their investigations. In our survey we asked agents to rate their agency in providing technical assistance when DNA technology is used or considered at a crime scene. The survey choices included Excellent, Good, Fair, and Poor. Overall, 41 percent of the agents rated their agencies "Excellent" and 44 percent rated them "Good." This was followed by 12 percent "Fair," and only 3 percent rated their agency as "Poor" on providing technical assistance on DNA matters. In addition, several agents made specific comments in reference to forensic experts and the value they contribute to their investigations. For example:

"Our FSC program has always provided me with excellent technical assistance, to include DNA information."

---

“Timely coordination with Forensic Science Consultant is a must. These individuals provide outstanding investigative assistance and guidance.”

“Forensic consultants can easily be consulted for guidance, as well as assistance.”

## Conclusion

Our survey instrument and our field visits confirm that MCIO agents use DNA analysis as an effective investigative tool. In addition, our review of case files determined that the agents obtained beneficial results by using DNA evidence developed from biological samples collected at crime scenes. Our agent survey also validated that the services and technical assistance provided by the MCIO forensic experts contribute significantly to the quality and productivity of investigations.

---

## A. DNA Technology in the Military Criminal Investigative Organizations

Although agents in the MCIOs have achieved effective results through their use of DNA technology, some improvements for using DNA technology as an investigative tool can be made. Specifically, all MCIOs need to provide additional clarification and guidance on the submission of DNA samples from unknown subjects. Further, NCIS is experiencing a backlog on DNA analysis of rape evidence currently being stored in evidence facilities, preventing potential DNA profiles from being entered into databases. Additional training on DNA technology may also be warranted to improve awareness of DNA database capabilities.

### Background

Agents usually follow their organization's guidance for submitting evidence to a laboratory for analysis. However, there is confusion among agents within each MCIO on whether evidence should be submitted for laboratory examination in unknown subject investigations. At a November 13, 1997, meeting of the DoD Forensic Science Committee,<sup>9</sup> USACIL representatives announced that they were connected to the FBI's national Combined DNA Index System (CODIS) and were capable of checking unknown subject DNA profiles against profiles in CODIS and in other DoD cases where the subject profiles have been aggregated. Further, they stated that USACIL had the ability to cross link cases by searching subject profiles against DNA profiles in CODIS and would now accept all types of cases for DNA analysis, to include cases where no suspect had been identified. At a November 16, 1998, DoD Forensic Science Committee meeting, USACIL representatives reiterated the USACIL position to process biological evidence in cases where there are no suspects.

---

<sup>9</sup> DODI 5100.86, DoD Forensic Science Committee, October 10, 1996, established the DoD Forensic Science Committee as a joint DoD committee for the review and resolution of forensic science issues of concern to the DoD forensic science community. Members of the committee consist of representatives from the IG DoD; the Defense Criminal Investigative Organizations; the Marine Corps Criminal Investigation Division; and the Office of the Armed Forces Medical Examiner at the Armed Forces Institute of Pathology.

---

## DNA Evidence of Unknown Subject(s)

**Agent Submission of Potential DNA Evidence of Unknown Subjects.** In our survey, 236 out of 240 agents responded to the question regarding DNA in unknown subject cases. We asked agents which statement was most accurate: “Submit whether or not there is a subject” or “Submit *only* if there is a subject.” Seventy-nine out of 85 (93 percent) USACIDC agents stated they submit whether or not there is a subject; 31 out of 73 (42 percent) NCIS agents stated they submit whether or not there is a subject; and 45 out of 78 (58 percent) AFOSI agents stated they submit whether or not there is a subject.

**MCIO Policies for Submission of Potential DNA Evidence of Unknown Subjects.** In our field site visits, forensic experts stated that for the most part they were not familiar with any specific written policies on this issue, but said such evidence should be submitted in most cases.

**NCIS Backlog of Rape Evidence.** In May 2000, NCIS, through a General Administrative memo, provided guidance to its field agents for retention of evidence collected on unsolved rape investigations. This guidance provided that: “... evidence collected during unsolved rape investigations will be held indefinitely. However, under certain circumstances, agents may seek approval to dispose of such evidence—such as when a decision is made to not prosecute, or when prosecution is unlikely. In such cases, clear and concise dialog with the Convening Authority, or his/her Staff Judge Advocate, and/or the prosecuting official(s) must occur before disposing of evidence.” Further guidance states: “Retained evidence should be maintained in the evidence storage facility at the NCIS field component where the investigation is controlled. It should not be forwarded to a consolidated evidence facility<sup>10</sup> unless control of the investigation has been transferred to that location. Retention locally will allow for review of the evidence by agents subsequently assigned to investigate unsolved cases. In addition, items held as evidence which lend themselves to DNA analysis should be submitted to USACIL for submission into CODIS.”

In September we visited the NCISRFL, Norfolk, Virginia. The laboratory director stated that the laboratory is currently storing unprocessed potential DNA evidence dating back to 1997. She estimated that approximately 100 items of biological evidence were being stored in refrigerators at the laboratory with a similar number being stored in the San Diego laboratory. Items being stored include evidence collected in sexual assault kits and blood and urine swabs. We have not determined how many items are being stored at NCIS field sites since the May 2000 guidance was issued. Although the analysis of these “rape kits” is low in priority in comparison to active cases, data from these kits are not being input to CODIS. At the time of our visit (September 2001) NCISRFL Norfolk logs indicated that 44 items had been shipped to USACIL for DNA analysis with the oldest case shipped for processing on February 7, 2001.

---

<sup>10</sup> Consolidated evidence facilities store evidence for several NCIS field offices within their immediate geographical area. The two consolidated evidence facilities are co-located within the NCISRFL, Norfolk, VA, and the NCISRFL, San Diego, CA.

---

## MCIO DNA Training

**MCIOs Basic Agent Training.** All MCIO agents are trained in crime scene processing and evidence handling in their basic agent courses. USACIDC provides a 15-week Apprentice Special Agent Course at the U.S. Army Military Police School, Fort Leonard Wood, Missouri. The course includes a 40-hour crimes against persons course that dedicates one hour to DNA training. NCIS agents attend a 15-week course at the Federal Law Enforcement Training Center, Glynco, Georgia. The course includes a 9-week criminal investigators course and a 6-week NCIS add-on course with one hour specifically dedicated to DNA. AFOSI provides an 11-week course to agents at the U.S. Air Force Special Investigations Academy, Andrews Air Force Base, Maryland. The course includes an 8-hour crime scene processing course and a 10-hour physical and biological evidence course. Although no specific time is devoted to DNA, DNA is discussed in these two courses.

**MCIOs Specialized DNA Training.** Using our survey questionnaire we asked agents to determine the amount of specialized training on DNA technology they received in the two years under review. We asked agents not to include DNA training received in their basic agent courses. Their responses revealed that 43 percent had received no specialized training in DNA; 44 percent had received 1-10 hours of DNA training; 5 percent had received 10-20 hours of DNA training; and 4 percent indicated they had received 20 hours or more of DNA training during that 2-year period. We also surveyed the agents to determine whether they felt trained and qualified to successfully identify, safeguard, collect, and preserve potential DNA evidence. Responses included: “Yes,” 46 percent; “Probably Yes,” 30 percent; “Uncertain,” 12 percent; “Probably Not” 7 percent; and “No,” 5 percent.

**Agent Familiarity with CODIS.** When we asked agents about their familiarity with CODIS, only 27 percent said they were “Very Familiar” or “Familiar” with the system. A total of 73 percent indicated they were “Somewhat Familiar” (28 percent) or “Not Familiar” (45 percent). Table 2 shows the breakdown of the responses from the MCIO agents on their familiarity with CODIS.

---

**Table 2. Agent Familiarity With CODIS**

	USACIDC	%	NCIS	%	AFOSI	%	Total	%
Very Familiar	6	7	3	4	4	5	13	5
Familiar	27	32	19	26	7	9	53	22
Somewhat	25	29	22	30	19	24	66	28
Not Familiar	27	32	30	41	50	62	107	45
No Response			(1)				(1)	
<b>Total</b>	<b>85</b>	<b>100</b>	<b>74</b>	<b>100</b>	<b>80</b>	<b>100</b>	<b>239</b>	<b>100</b>

## Summary

We find that overall the MCIO practices and guidance on DNA technology enhance the effectiveness of the law enforcement community. To enhance the beneficial usage of DNA technology, agents need to properly use it whenever possible and submit evidence for DNA analysis in unknown subject cases when investigations warrant the use of DNA. Our survey questionnaire revealed that some agents may not be routinely submitting evidence when a subject is not known. Additional guidance and training are needed to ensure that agents collect and submit evidence on unknown subjects that would contribute to the DNA profiles in CODIS. Also, the storing of evidence needing DNA analysis also prevents profiles from being entered into databases that have the potential to identify perpetrators, exonerate suspects, and link crime scenes. Lastly, it is particularly essential that agents are made aware of the importance of CODIS and its benefits to the law enforcement community in generating investigative leads in crimes where biological evidence is recovered from the crime scene.

## Recommendations and Management Comments

**A.1. We recommend that the Commanders, U.S. Army Criminal Investigation Command and Air Force Office of Special Investigations, and the Director, Naval Criminal Investigative Service, provide additional guidance and training for submission of potential DNA evidence in unknown subject cases to forensic laboratories for analysis.**

**Army Comments.** The Army concurred stating that an operational memorandum is being dispatched to clarify and re-emphasize the submission of DNA evidence in unknown subject cases.

**Navy Comments.** The Navy concurred stating that in addition to the guidance already incorporated in its crime scene guidance for new-hire agents, the usefulness of submitting DNA evidence in unknown subject cases will be provided during in-service classes for veteran agents.

---

**Air Force Comments.** The Air Force concurred stating that AFOSI is adding information to the AFOSI basic agent course curriculum and updating AFOSIMAN 71-103, Vol. 2, *Special Investigations* Forensic Sciences. AFOSI is also sending a memorandum to all field units informing them of the requirements. The Air Force also stated the FSCs will be sure to recommend DNA analysis in all appropriate investigations

**A.2. We recommend that the Director, Naval Criminal Investigative Service, either contract out on a one-time basis or work with the U.S. Army Criminal Investigation Laboratory to clear up the NCIS backlog of unprocessed rape evidence currently being stored in evidence facilities.**

**Army Comments.** Although the Army was not asked to comment on this recommendation, they offered the following: The NCIS backlog of unprocessed rape cases should be sent to the USACIL for processing. The Director, USACIL, and the Navy crime laboratory are coordinating submission of these cases to USACIL.

**Navy Comments.** The Navy concurred stating NCIS has been working with the U.S. Army Criminal Investigation Laboratory to ensure this backlog is cleared as soon as possible. Contracting out the work will be considered as a last resort and will only be pursued if USACIL is unable to process these additional evidence submissions in a timely manner.

**A.3. We recommend that the Commanders, U.S. Army Criminal Investigation Command and Air Force Office of Special Investigations, and the Director, Naval Criminal Investigative Service, provide training or take other action as necessary to strengthen agents' awareness of CODIS and to understand its significance as an investigative tool.**

**Army Comments.** The Army concurred stating USACIDC is revising Army Regulation 195-5, Evidence Procedures, and Field Manual 19-20, Law Enforcement Investigations to provide additional guidance on DNA collection, evaluation, and submission. The U.S. Army Military Police School has developed a new Advanced Crime Scene course, which contains an adjunct three hours of training on DNA evaluation and collection. The USACIDC Forensic Science Officers will also develop supplementary training and post the guidance to the USACIDC Intranet site.

**Navy Comments.** The Navy concurred stating CODIS has been included in new-hire agent training to ensure a complete understanding of the data bank information and how it is used to resolve criminal issues. It will also be included in future in-service training for veteran field agents. Training CDs relating to DNA evidence and the CODIS system recently produced by the National Institute of Justice's National Commission on the Future of DNA Evidence are being obtained and distributed to the field as well.

**Air Force Comments.** The Air Force concurred stating they will include CODIS in their three-part process mentioned in response to Recommendation A.1.1.



---

## B. DNA Profiling

In the military, not all DNA profiles are being entered into CODIS. This occurs because MCIOs may use laboratories for DNA evidence processing that are not CODIS certified. Because of this, database registries are not currently comprehensive and cannot be fully utilized.

### Background

**Combined DNA Index System (CODIS).** The DNA Identification Act of 1994 (P.L. 103-322) formalized FBI authority to establish a national DNA index for law enforcement purposes. The index became operational in 1998. CODIS is an FBI automated DNA information processing and telecommunications system that includes the National DNA Index System (NDIS), State DNA Index System, and Local DNA Index System. The State DNA Index System allows laboratories within a state to exchange DNA profiles with each other. States provide DNA profiles to the FBI for indexing into NDIS. NDIS links profiles from the databases of each of the 50 states to provide law enforcement with a national network to investigate violent crime.

Using two indexes, CODIS generates investigative leads in crimes where biological evidence is recovered and analyzed. The convicted offender index contains DNA profiles of individuals convicted of sex offenses and other violent crimes. The forensic index contains DNA profiles from crime scene evidence.

The aim of the DNA Identification Act of 1994 was to increase the capabilities and capacity of State and local forensic laboratories to conduct DNA testing. In the first year, the National Institute of Justice, U.S. Department of Justice, awarded \$8.75 million to 30 states. More recently Congress approved the FY 2002 U.S. Department of Justice appropriations bill that included \$40 million for the DNA Backlog Elimination Act of 2000 to reduce the DNA sample backlog. Federal laboratories do not receive funding under the DNA Identification Act of 1994.

### DoD Implementation of the DNA Analysis Backlog Elimination Act of 2000

On May 16, 2001, the USD (P&R) issued a memorandum establishing policy for implementing Section 5 of the DNA Analysis Backlog Elimination Act of 2000, 10 U.S.C. § 1565. The memorandum requires that DNA samples be collected from all Armed Forces members convicted of a qualifying military offense (QMO),<sup>11</sup> except those who are currently in Bureau of Prisons institutions or on parole under supervision of a Federal probation officer. In addition, the memorandum designates USACIL to analyze all collected DNA

---

<sup>11</sup> Qualifying Military Offenses under 10 U.S.C. § 1565 include: Murder, Voluntary Manslaughter, Rape, Carnal Knowledge, Forcible Sodomy, Sodomy With a Child, Aggravated Assault, Indecent Assault, Indecent Acts With Another, Indecent Acts With a Child, Indecent Language to a Child, Prostitution Involving a Minor, Kidnapping, Robbery, Housebreaking, Maiming, and Arson.

---

samples and to submit the results to the FBI. The policy issued in the memorandum will be published in a future revision of Department of Defense Instruction 1325.7, "Administration of Military Correctional Facilities and Clemency and Parole Authority."

On March 9, 2000, USACIL signed a MOU with the FBI to participate in the CODIS program. The MOU establishes general and specific standards to be followed by the laboratory for participating and utilizing NDIS, including the upload of DNA profiles to NDIS. All forensic DNA testing laboratories supported by CODIS are required to be in compliance and meet standards in accordance with the "Quality Assurance Audit for Forensic DNA and Convicted Offender DNA Databasing Laboratories" developed by the FBI. The FBI provides CODIS software, installation, training, and user support free of charge to State and local law enforcement laboratories performing DNA analysis. As of May 15, 2001, the FBI had installed CODIS in 161 laboratories.

**CODIS Convicted Offender Index.** DNA samples of convicted military offenders are to be indexed consistent with the QMOs identified in the May 16, 2001, USD (P&R) memorandum. In August 2001, USACIL shipped out sample collection kits and a Microsoft® PowerPoint® DNA collection kit training package to the larger military correctional facilities. Based upon the QMOs, USACIL anticipates a workload of processing 1,000 samples from previously convicted offenders in confinement and 1,000 new samples per year from new convictions. As of December 2001, USACIL had received 300 convicted offender samples. Processing samples by making bloodstain cards began in December 2001, and the typing of samples and entering profiles from these cards into CODIS is anticipated to begin in June or July 2002.

**CODIS Forensic Index.** The forensic index contains DNA profiles from crime scene evidence. Matches made among profiles in the forensic index can link crime scenes together, possibly identifying serial offenders. Based on a match, law enforcement personnel in multiple jurisdictions can coordinate their respective investigations and share the leads they develop independently.

Information provided by USACIL indicates that from October 1, 1999, through September 30, 2000, the laboratory's workload for DNA forensic analysis was: Army 49 percent, Air Force 22 percent, and Navy (including Marine Corps) 29 percent. In addition to using USACIL, NCIS and AFOSI use other laboratories for processing potential DNA evidence. Because NCIS and AFOSI do not track costs or the laboratories their agents use, we were unable to readily determine whether the laboratories being used by agents are ASCLD accredited, or if they are CODIS installed laboratories. AFOSI provides their agents a list of approved laboratories to use for evidence processing that also identifies laboratories with DNA capabilities. Our review of that list showed 32 laboratories with DNA capability. Sixteen of the 32 laboratories (50 percent) do not have CODIS installed and 14 of the laboratories (44 percent) are not ASCLD certified (as of June 2001). NCIS has no such list, and its agents may use their discretion in selecting a laboratory.

---

## Resources

**Costs to Implement the Act.** To meet the requirements of the DNA Analysis Backlog Elimination Act, USACIL expended approximately \$213,300 for equipment and facility modifications to implement CODIS. USACIL moved two of its forensic biologists from casework to run the CODIS programs and hired two additional staff members to backfill the vacancies left in the DNA casework section. It is estimated that the two DNA examiners dedicated to the CODIS program with salaries, benefits, training, and proficiency tests will cost \$182,700 annually. USACIL estimates an annual cost for staffing, equipment, and supplies based on 1,000 samples a year to be \$298,500. The estimated supply costs for processing a sample are \$33.57.<sup>12</sup> The Army provided USACIL \$518,000 for initial costs in FY 2001, and \$298,000 for FY 2002 to implement the Act. No central DoD funding was provided to implement the Backlog Elimination Act.

## Summary

USACIL is a state-of-the-art, CODIS certified forensic laboratory, and its DNA forensic work is highly effective. However, it is not currently feasible for USACIL to meet all of the Services' DNA analysis needs. Therefore, it is essential that NCIS and AFOSI use other forensic laboratories for their DNA evidence processing that are CODIS certified to enhance DNA databases and to achieve the maximum benefit as an investigative tool.

## Recommendations, Management Comments, and Evaluation Response

**B. We recommend that the Director, Naval Criminal Investigative Service, and the Commander, Air Force Office of Special Investigations, review guidance to agents on the use of laboratories for DNA analysis and ensure that laboratories used are CODIS certified.**

**Navy Comments.** The Navy concurred and advised that it is reviewing its guidance for the field to ensure the laboratories used are CODIS certified.

**Air Force Comments.** The Air Force partially concurred, stating that it concurs with the recommendation in theory. The Air Force also agreed that using a CODIS certified laboratory has potential as an investigative tool and could assist in resolving some investigations. However, according to the Air Force, the issues are more complex in practice and many factors must be taken into account when selecting a laboratory for evidence analysis. Air Force advised that, at the current time, it will not mandate using CODIS certified laboratories for the following key reasons:

---

<sup>12</sup> USACIL's estimated supply costs per sample: Collection - \$4.80; Preservation - \$4.67; DNA Typing - \$24.10. Total: \$33.57.

---

- USACIL does not have the capability to process all AFOSI evidence in a timely manner;
- certain investigations are time sensitive, requiring immediate evidence processing;
- using only CODIS certified laboratories would likely cause cost increases (to pay for different shipping methods, and some CODIS laboratories charge for their services); and
- many AFOSI detachments have memoranda of understanding or agreement with local/state laboratories under which only the specific detachment may use the laboratory; thus, the closest CODIS laboratory might not be available to other detachments, which would be forced to find another laboratory or send evidence to USACIL, thereby increasing turnaround time.

Although not agreeing to use only CODIS certified laboratories, Air Force advised that it would have FSCs review the listing of approved laboratories and then (1) contact the laboratories to determine if they are or will be CODIS certified; (2) update the list to annotate those laboratories with CODIS capability currently, or in the near future; and (3) have FSCs continue contacting laboratories periodically and ensure the list is continually updated.

**Evaluation Response.** We cannot accept the Air Force comments. As indicated in the background section of this report, CODIS is the national database standard for indexing DNA in the United States.<sup>13</sup> In addition to aiding individual AFOSI investigations, which the Air Force comments recognize, CODIS data can be used to link and help solve multiple crimes that an individual or group may have committed throughout the world, thereby benefiting both civilian and military law enforcement organizations, within and outside the United States.<sup>14</sup> As a result, not entering DNA profiles in CODIS dilutes the worldwide investigative effectiveness for DoD law enforcement agencies charged with protecting a highly mobile population. This result is not acceptable.

---

<sup>13</sup> The DNA Analysis Backlog Elimination Act of 2000 (PL 106-546) authorizes the Attorney General of the United States to make grants for use by States who carry out DNA analyses of samples taken from individuals convicted of qualifying State offenses for inclusion into CODIS; to carry out DNA analyses of samples taken from crime scenes for inclusion into CODIS; and to increase the capacity of State and local laboratories to carry out DNA analyses of samples from crime scenes for inclusion into CODIS. CODIS software has been installed in 189 laboratories in 20 countries, including 153 laboratories in the U.S. Additionally, the FBI predicts that in the next year a CODIS certified laboratory will exist in each of the 50 States. Therefore, finding and using a CODIS certified laboratory is not generally a problem.

<sup>14</sup> We note in this regard that USACIL, using CODIS data, has had multiple “hits,” and has generated multiple leads in individual investigations. Additionally, a recent notable outcome was the arrest of an Air Force member after CODIS connected the Center City serial rapist in Philadelphia, Pennsylvania, to a serial rapist in Fort Collins, Colorado. The Air Force member lived in Ft. Collins.

---

Furthermore, although the Air Force “key reasons” for not adopting our recommendation may appear reasonable on the face, they cannot be substantiated. As discussed in the report, neither Air Force nor the other Services maintained data upon which we could readily determine the extent to which they use non-CODIS certified laboratories. As a result, we could not compare costs and timeliness, and the Air Force comments do not indicate that they are based on any such actual comparison.

Our primary concern is that DNA profiles from DoD evidentiary materials are included in CODIS. To the extent that an exigent circumstance might actually preclude using a CODIS certified laboratory to avoid jeopardizing an investigation, steps can still be taken to meet our concern. Specifically, the FBI has advised us that it will accept DNA profiles based on a non-certified laboratory examination, provided the non-certified laboratory certifies that the laboratory meets the FBI’s CODIS standards and a 100 percent review is conducted as quality assurance on the examination. Thus, if a Service were forced to use a non-CODIS certified laboratory in a particular investigation, the exigent circumstance could be justified in the case file, and the Service could use the FBI exception procedure to attempt to get the FBI to accept the DNA profile for inclusion in CODIS. In commenting on this final report, therefore, the Air Force should reconsider its position based on this option.<sup>15</sup>

---

<sup>15</sup> We discussed this option with AFOSI in processing the Air Force comments and did not receive a favorable reaction. Should Air Force continue its current position in responding to the final report, comments on the final report should include the following specific supporting data:

1. identify each investigation wherein AFOSI used a non-CODIS laboratory to process DNA evidence during calendar year 2001;
2. the specific reason(s) why AFOSI used a non-CODIS laboratory in each investigation; and
3. the specific processing and handling costs that AFOSI incurred in each investigation using the non-CODIS laboratory.
4. a comparison of the timeliness of response from CODIS and non-CODIS certified laboratories.



---

# Appendix A. Evaluation Process

## Scope and Methodology

**Work Performed.** We performed this evaluation from February through November 2001. This evaluation focused on the MCIOs policies and practices for the utilization of DNA investigative technology within their organizations and on DoD implementation of the DNA Analysis Backlog Elimination Act of 2000. We reviewed pertinent laws, policies, and guidance related to DNA technology. We conducted interviews and held discussions with program managers and staff members at the headquarters of the MCIOs. We also held interviews with two state law enforcement agencies to compare their policies and practices of DNA technology with the MCIOs. We visited State and Federal forensic laboratories to observe procedures and general practices for receiving and analysis of potential DNA evidence. To determine the extent to which DNA technology has played a role in MCIO general crimes investigations we reviewed investigative case files and conducted a survey questionnaire addressed to a sampling of MCIO agents. We held interviews at selected field sites with designated MCIO forensic science experts to discuss workload, training, laboratory services associated with DNA, and to follow up on survey questionnaire results.

We also visited the U. S. Army Criminal Investigation Laboratory at Fort Gillem, Georgia, to assess DNA technology and general practices used in support of criminal investigations and to determine the adequacy of resources associated with the DNA Analysis Backlog Elimination Act of 2000. Additionally, we met with Under Secretary of Defense for Personnel and Readiness personnel to discuss the Army's role as Executive Agent for the DNA Analysis Backlog Elimination Act of 2000.

**Use of Computer-Processed Data.** We relied on computer-processed data from the MCIOs to establish case file reviews and to establish relative sizes of general crimes agent populations. Since we are not projecting any data from the case file reviews or the questionnaire results, the accuracy of the MCIOs' databases is not relevant to the evaluation results and we did not evaluate their accuracy.

**Methodology.** The MCIOs provided us data runs listing 7,551 investigations for CYs 1999 through 2000. The investigations represented Uniform Code of Military Justice offenses determined to be a "qualifying military offense" under the DNA Analysis Backlog Elimination Act of 2000. Using the data runs, an investigative case file sample for each MCIO was calculated using a 95 percent confidence level and 10 percent precision level. The sample size represented 280 records (USACIDC 95; NCIS 95; and AFOSI 90). The MCIOs also provided us listings of their general crimes agents for purposes of conducting a survey questionnaire on the World Wide Web. Using a quota type sample, 240 agents (USACIDC 85; NCIS 75; and AFOSI 80) from 149 locations participated in the survey.

---

**Contacts During the Evaluation.** We visited or contacted individuals and organizations within DoD, FBI, Virginia Department of Criminal Justice Services, Fairfax County Police Department, and the Colorado Springs Police Department. Further details are available on request.

## Prior Coverage

### **Inspector General of the Department of Defense**

IG DoD, Report No. 985008X, “Evaluation of the Department of Defense Forensic Laboratories,” September 16, 1998. This report can be accessed over the Internet at <http://www.dodig.osd.mil/dcis/cipo/evals.htm>.

---

## **Appendix B. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense for Personnel and Readiness\*  
General Counsel, Department of Defense  
Deputy General Counsel (Inspector General)\*  
Director, Defense Criminal Investigative Service\*

### **Department of the Army**

Inspector General, Department of the Army\*  
Auditor General, Department of the Army\*  
Deputy Chief of Staff for Operations and Plans\*  
Commander, U.S. Army Criminal Investigation Command\*  
Commander, U.S. Army Criminal Investigation Laboratory\*

### **Department of the Navy**

Director, Naval Criminal Investigative Service\*  
Naval Inspector General\*

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)\*  
Inspector General, Department of the Air Force\*  
Commander, Air Force Office of Special Investigations\*

### **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Reform  
House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, Committee on Government Reform  
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform  
House Subcommittee on Technology and Procurement Policy, Committee on Government Reform  
\*Recipient of draft report.



---

## **Management Comments**

*Department of the Army Comments*



DEPARTMENT OF THE ARMY  
OFFICE OF THE  
DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS  
400 ARMY PENTAGON  
WASHINGTON DC 20310-0400



DAMO-ODL

4 March 2002

MEMORANDUM THRU DEPUTY CHIEF OF STAFF, G-3 *DM SWAK 02*  
DIRECTOR OF THE ARMY STAFF *ALL SENSITIVE* *SW 11/02*  
ASSISTANT SECRETARY OF THE ARMY (MANPOWER AND  
RESERVE AFFAIRS)

FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL, CRIMINAL  
INVESTIGATION POLICY AND OVERSIGHT, 400 ARMY NAVY DRIVE, ARLINGTON,  
VA 22202-2885

SUBJECT: Draft Report of Evaluation of the Policies and Practices for the Utilization of  
DNA Technology within the Military Criminal Investigative Organizations

1. The Office of the Deputy Chief of Staff, G-3 has reviewed the draft subject report.  
Recommended revisions to the text of the draft report are enclosed. Comments on  
recommendations A.1, A.2, and A.3 are provided below.

a. Recommendation A.1. The Deputy Chief of Staff for Operations, Headquarters,  
U.S. Army Criminal Investigation Command (USACIDC), and the Commander, U.S.  
Army Criminal Investigation Command Laboratory (USACIL), are dispatching an  
operational memorandum to clarify and re-emphasize the submission of DNA evidence  
in unknown subject cases.

b. Recommendation A.2. The Naval Criminal Investigative Service backlog of  
unprocessed rape cases should be sent to the USACIL for processing. The Director,  
USACIL, and the Naval crime laboratory are coordinating submission of these cases to  
USACIL. Private contract laboratories and some state labs cannot enter data or run  
comparisons on the Combined DNA Index System (CODIS). The Federal Bureau of  
Investigation and other agencies are addressing the issue of the quality of DNA data  
being generated by contract labs.

c. Recommendation A.3. The USACIDC is revising Army Regulation 195-5,  
Evidence Procedures, and Field Manual 19-20, Law Enforcement Investigations, to  
provide additional guidance as to the collection, evaluation, and submission of DNA.  
The U.S. Army Military Police School has developed a new Advanced Crime Scene  
course, which contains an adjunct three hours of training on the evaluation and  
collection of DNA. The USACIDC Forensic Science officers will also develop  
supplementary training and post the guidance to the USACIDC intranet site.

Printed on Recycled Paper

*2010-4517*

DAMO-ODL

SUBJECT: Draft Report of Evaluation of the Policies and Practices for the Utilization of DNA Technology within the Military Criminal Investigative Organizations

2. Point of contact is Mr. Jeffery Porter (703) 695-8823.

Encl

  
PETER W. CHIARELLI  
Major General, U.S. Army  
Director of Operations,  
Readiness and Mobilization

*Department of the Navy Comments*



DEPARTMENT OF THE NAVY  
OFFICE OF THE ASSISTANT SECRETARY  
(MANPOWER AND RESERVE AFFAIRS)  
1000 NAVY PENTAGON  
WASHINGTON, D.C. 20350-1000

MAR 13 2002

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Draft Report on the Evaluation of the Policies and Practices for the Utilization of DNA Technology within the Military Criminal Investigative Organizations (Project No. 2001C001)

The Department of the Navy has reviewed the subject report and concurs with the four stated recommendations. In addition to complying with the recommendations, the Naval Criminal Investigative Service (NCIS) intends to exceed Recommendation 2 by also submitting other types of no-suspect cases that have serological evidence for CODIS profiling, as set forth in Attachment (1).

If additional information or assistance is needed, the NCIS points of contact for this matter are: Special Agent Donald Housman, Supervisor, Forensic Consultant Unit, at (202)433-9216, and Mr. Maris Jaunakais, Chief, Forensic Sciences Division at (202) 433-9180.

*Thomas V Colella*

Thomas V. Colella  
Principal Deputy  
Assistant Secretary of the Navy  
(Manpower and Reserve Affairs)

Attachment 1: Headquarters, NCIS memorandum of 11 March 2002



DEPARTMENT OF THE NAVY

HEADQUARTERS  
NAVAL CRIMINAL INVESTIGATIVE SERVICE  
WASHINGTON NAVY YARD BLDG 111  
716 SICARD STREET SE  
WASHINGTON DC 20388-5380

MAR 11 2002

MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY  
(MANPOWER & RESERVE AFFAIRS)

SUBJECT: Evaluation of the Policies and Practices for the Utilization of DNA Technology within the Military Criminal Investigative Organizations  
(Project No. 2001C001)

Enclosure (1) is provided in response to four recommendations in the subject named report. The Naval Criminal Investigative Service (NCIS) concurs with all the recommendations but intends to go beyond recommendation 2 and submit not only no-suspect rape evidence cases but also other types of no-suspect cases for CODIS profiling.

The NCIS point of contacts for this matter are Special Agent Donald Housman, Supervisor, Forensic Consultant Unit, at (202) 433-9216, and Mr. Maris Jaunakais, Chief, Forensic Sciences Division at (202) 433-9180.

*Veronica McCarthy*  
VERONICA MCCARTHY  
By Direction

Enclosure



DEPARTMENT OF THE NAVY

HEADQUARTERS  
NAVAL CRIMINAL INVESTIGATIVE SERVICE  
716 SICARD STREET SE SUITE 2000  
WASHINGTON NAVY YARD DC 20388-5380

5700  
06 MARCH 2002  
23/2U2716

MEMORANDUM FOR THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

FROM: Director, Naval Criminal Investigative Service  
Prepared by: SA Donald Housman, Supervisor, Forensic Consultant  
Unit, and Mr. Maris Jaunakais, Chief, Forensic Sciences Division

SUBJECT: Draft Report on the Evaluation of the Policies and Practices for  
the Utilization of DNA Technology within the Military Criminal  
Investigative Organizations (Project No. 2001C001)

PURPOSE: To provide comments on the findings and recommendations from  
the subject named report

SUMMARY OF RECOMMENDATIONS:

- 1) The MCIOs provide additional guidance and training for submission of DNA evidence in unknown subject cases to forensic laboratories for analysis.
- 2) The NCIS either contract out on a one-time basis or work with the U.S. Army Criminal Investigation Laboratory to clear up the NCIS backlog of unprocessed rape evidence.
- 3) The MCIOs provide training or take other action as necessary to ensure that agents are familiar with CODIS and understand DNA's significance as an investigative tool.
- 4) The NCIS and AFOSI review guidance to agents on the use of laboratories for DNA analysis and ensure that laboratories used are CODIS certified.

STATEMENT OF NCIS POSITION:

The NCIS appreciates the results of the DOD-IG review confirming that the MCIOs use DNA technology as an investigative tool and have achieved effective results. The following comments are provided in response to the recommendations made by the DOD-IG.

NCIS concurs with the recommendation that the MCIOs provide additional guidance and training about the evidentiary potential of unknown subject cases involving DNA evidence. The crime scene guidance provided to new hire agents currently includes this training. The usefulness of submitting DNA evidence in unknown subject cases will be provided during future in-service classes for veteran agents as well. Indeed, the NCIS sees a growing usefulness of DNA technologies in the areas of counter-intelligence,

counter-terrorism and security related investigations as well as the more traditional criminal investigation fields. The agency intends to broaden its use of field collection of potential DNA evidence in unknown subject cases to support these areas. The training of field agents will become an integral part of this process.

NCIS concurs with the recommendation to reduce the NCIS backlog of unprocessed rape evidence. In addition, the NCIS will also be submitting other types of no-suspect cases that have serological evidence for CODIS profiling. The NCIS has been working with the U.S. Army Criminal Investigation Laboratory (USACIL) to ensure this backlog is cleared as soon as possible. It is anticipated that this backlog will be greatly reduced in the near future. Contracting out the work is considered a last resort, and will only be pursued if USACIL is unable to process these additional evidence submissions in a timely manner. A shortcoming of private contract DNA laboratories is that they do not have access to the CODIS database. Therefore, they cannot download profile data into or conduct database searches.

NCIS concurs that training is needed to ensure that agents are familiar with CODIS and understand its significance as an investigative tool. Again, CODIS has been included in the training of new hire agents to ensure there is a complete understanding of the data bank information and how it is used to resolve criminal issues. It will be included in future in-service training for veteran field agents. Training CDs relating to DNA evidence and the CODIS system recently produced by the National Institute of Justice's (NIJ) National Commission on the Future of DNA Evidence are being obtained and distributed to the field as well.

NCIS is currently reviewing the guidance provided to field agents on the use of laboratories for DNA analysis to ensure that laboratories used are CODIS certified. NCIS has always sought to use laboratories certified by the American Society of Crime Laboratory Directors (ASCLD). We see the use of CODIS certified laboratories as an extension of this endeavor to further our efforts to maximize the usefulness of DNA evidence.



VERONICA MCCARTHY  
By Direction

*Department of the Air Force Comments*



**DEPARTMENT OF THE AIR FORCE  
OFFICE OF THE INSPECTOR GENERAL  
WASHINGTON, DC**

26 Feb 2002

MEMORANDUM FOR Assistant Inspector General for Auditing  
Office of DoDIG

FROM: SAF/IGX  
1140 Air Force Pentagon  
Washington DC 20330-1140

SUBJECT: DoDIG Evaluation Report on the Policies and Practices for the Utilization of DNA Technology within the Military Criminal Investigative Organizations (Project No. 2001C001)

1. AFOSI has reviewed this report and provides the following comments:

In reviewing the draft evaluation report, several areas are identified within the MCIOs that need additional emphasis in light of the recently mandated requirements dealing with DNA. Specifically, three recommendations were made that apply to AFOSI. The below discussion describes the process that we will use to implement these recommendations:

**Recommendation A.1.** We recommend that the Commanders, U.S. Army Criminal Investigation Command and Air Force Office of Special Investigations, and the Director, Naval Criminal Investigative Service, provide additional guidance and training for submission of potential DNA evidence in unknown subject cases to forensic laboratories for analysis.

**Response: Concur.** This is a fairly simple 3-part fix. 1) We will coordinate with the USAFSIA and have this information added to basic course curriculum (briefed during the physical/biological evidence block of instruction); 2) We will update AFOSIMAN 71-103, Vol. 2, and will draft up a memo and send out to all field units informing them of this requirement (this will also be included into our Forensic Science Newsletter that is published semi-annually – next issue is Jun 02); and 3) Since the vast majority of cases involving DNA already go through the Forensic Science Consultants (FSCs), FSCs will be sure to recommend this in all appropriate investigations. Estimated time of completion is as follows: Step 1 – Feb 02; Step 2 – Jul 02; and Step 3 – Feb 02.

**Recommendation A.3.** We recommend that the Commanders, U.S. Army Criminal Investigation Command the Air Force Office of Special Investigations, and the Director, Naval Criminal Investigative Service, provide training or take other action as necessary

to strengthen agents' awareness of CODIS and to understand its significance as an investigative tool.

**Response: Concur.** As stated above in response to Recommendation A.1., the 3-part process will also include information on CODIS. The estimated time of completion is the same as above.

**Recommendation B.** We recommend that the Director, Naval Criminal Investigative Service, and the Commander, Air Force Office of Special Investigations, review guidance to agents on the use of laboratories for DNA analysis and ensure that laboratories used are CODIS certified.

**Response: Partial Concur.** While we concur with this recommendation in theory (only use a CODIS certified laboratory), in practice, this is more complex and many factors have to be taken into account when selecting a lab for evidence analysis. We agree however, that it has potential as an investigative tool that could assist in the resolution in some of our investigations. There are several steps that we can do in the short term to aid in this area: 1) We will have the FSCs review AFOSIMAN 71-103, Vol. 2 (the instruction that lists the AFOSI approved laboratories) and then have them contact the laboratories in their AOR to determine if they are/will be CODIS certified; 2) We will then update the Instruction and annotate those labs that have CODIS capability or those that will in the near future; and 3) FSCs will periodically contact the labs to determine their current capabilities (ensures the instruction is continually updated). The estimated time of completion is as follows: Step 1 – Apr 02; Step 2 – Jul 02; and Step 3 – Ongoing. However, there are several key reasons why our agency will not mandate the use of only CODIS certified labs at this time:

- USACIL does not have the capability to process all of our evidence – turnaround times for DNA evidence are already over several months and would only increase
  - The time sensitive nature of certain investigations – some investigations require evidence to be processed immediately
  - Unprojected costs – by using only CODIS certified labs, the cost would likely increase (paying for different shipping methods and some CODIS labs charge for their services)
  - Established MOUs with state/local laboratories - many detachments have MOUs or agreements with local/state labs where only that detachment can use the laboratory (therefore the closest CODIS lab may not be available to other detachments and they would be forced to find another lab or send the evidence to USACIL – again increasing turnaround times)

*Department of the Air Force Comments*

3

Therefore, we will not mandate that our agency has to use a CODIS certified laboratory at this time. Hopefully in the future, more laboratories will be CODIS certified and USACIL will reduce their turnaround times. Until this happens (we will maintain constant contact with USACIL), our FSCs will ensure that this valuable investigative step is considered/utilized when making the decision on where to send the evidence for analysis.

2. Please let me know if you have any questions. You may contact me at 697-0411.

//SIGNED//

RONALD E. HARVEY, Col, USAF  
Director of Special Investigations

cc: SAF/FMPF

## **Evaluation Team Members**

The Criminal Investigative Policy and Oversight Directorate, Office of the Assistant Inspector General for Investigations, Department of Defense, prepared this report. Personnel of the Office of the Inspector General of the Department of Defense, who contributed to the report are listed below.

David E. Holmes  
Phyllis M. Brown  
Yvonne M. Cormier  
Scott D. Russell  
Terry L. Hammer